

in that EA, the Commission would hold an auction for the EA rights to the contested channels. The Commission could hold such auctions on a periodic basis. If no other party asserted rights to the channels within the comment period, the EA license would automatically issue.

Once an EA in the 928/952/956 MHz band was converted or acquired at auction, the regulatory treatment of the EA would be identical to EAs in the other MAS bands, including construction requirements, partitioning rights, and interference limitations. Any incumbent internal, private-use licensees on the same channels within the same EA would, at the option of the new EA licensee, be grandfathered or relocated to other MAS channels at the EA licensee's expense.

This proposal would extend to subscriber-based licensees in the 928/952/956 MHz bands treatment similar to that which the Commission has proposed to extend to other subscriber-based licensees in this proceeding, while retaining the ability of private licensees to operate existing facilities and acquire new facilities within this band on a site-by-site basis. It would also result in great administrative savings. When Radscan constructs facilities to serve an area, it obtains a number of master station licenses to provide all remote units in the area with redundant coverage from at least two master stations. In this way, Radscan achieves *de facto* geographic-area coverage through site-by-site licensing. However, from both the Commission's and Radscan's perspective, the site-by-site method is administratively burdensome.

For example, Radscan may need to construct master stations within areas it already covers in order to enhance overall system reliability. Similarly, Radscan may need to relocate master stations within its coverage area in order to improve coverage or operate more efficiently. Radscan also files applications to expand its coverage area as economic and demographic trends expand the locations where its services are required. Under the current site-by-site licensing

scheme, Radscan must file, and the Commission must process, separate applications for each such adjustment. Under an EA licensing approach, the Commission would not be burdened with such applications.

Allotting contested licenses for subscriber-based services by competitive bidding would also satisfy Congressional intent, as expressed in Section 309(j) of the Communications Act. Although the proposal contains novel elements, Radscan is prepared to work with the Commission and other MAS licensees to implement it in a manner acceptable to all.

V. THE COMMISSION SHOULD EXTEND THE PROPOSED OPERATIONAL FLEXIBILITY TO INCUMBENT LICENSEES WITHIN THE MAS BANDS.

The Commission proposes to permit geographic-area licensees to use both point-to-point and point-to-multipoint operations.^{42/} The Commission tentatively concludes that it should extend this same operational flexibility to incumbent MAS licensees.^{43/} Radscan supports this proposal and the Commission's tentative conclusion.

Radscan has long advocated the use of point-to-point communications in the MAS frequencies. Indeed, Radscan has been instrumental in achieving such operational flexibility. In 1986, for example, Radscan filed a petition for rulemaking requesting that master-to-master communications be permitted on MAS channels. The Commission adopted Radscan's proposal, recognizing that requiring MAS licensees to employ a separate point-to-point link would be spectrally and economically inefficient.^{44/}

^{42/} Notice at ¶ 42.

^{43/} Notice at ¶¶ 40, 42.

^{44/} *Amendment of Part 94 of the Rules to Permit Intrasystem Communications among Multiple Address System Master Stations, Report and Order*, 3 FCC Rcd 1564, 1568 (1988) (subsequent history omitted).

Radscan is gratified that the Commission recognizes the value in permitting licensees to use their spectrum "in ways which are privately beneficial without being publicly detrimental."^{45/} The Commission should adopt its proposals to grant geographic area licensees operational flexibility. Moreover, as directed by statute, the Commission should extend the same operational flexibility to incumbent MAS licensees.^{46/}

VI. CONCLUSION

Radscan respectfully requests that the Commission take action consistent with the views expressed herein.

Respectfully submitted,
RADSCAN, INC.

By: 

Edwin N. Lavergne
J. Thomas Nolan

GINSBURG, FELDMAN & BRESS, CHARTERED
1250 Connecticut Avenue, NW
Washington, D.C. 20036
(202) 637-9000

Its Attorneys

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^{45/} See *Hush-A-Phone Corp. v. United States*, 238 F.2d 266, 269 (D.C. Cir. 1956).

^{46/} See 47 U.S.C. § 309(j)(6) ("Nothing in [Section 309(j)], or the use of competitive bidding, shall . . . be construed to convey any rights . . . that differ from the rights that apply to other licenses within the same service that were not issued pursuant to [Section 309(j)].").

ENGINEERING STATEMENT OF GERALD S. HARRISON

My name is Gerald S. Harrison. I am the Engineering Manager for Radio Products at ADEMCO. I received a B.E.E. degree in 1952, and an M.E.E. in 1957, and for the past 13 years I have been responsible for the development of ADEMCO's radio transmission equipment for alarm monitoring services.

ADEMCO's transmitters and receivers are designed and optimized for operation on 25 kHz channels in the 928/952 MHz bands. Remote units transmit on a 928 MHz channel and receive on a 952 MHz channel. While these units can be configured to operate on any one of several channel pairs within the 928/952 MHz bands, they cannot operate on channels in other bands without undergoing significant redesign at great expense.

Circuits designed to transmit at 928 MHz, for example, will not function at 932 MHz, because they are tuned to pass signals within a narrow frequency range around 928 MHz and to reject signals at frequencies outside of that range. As frequencies approach the outer boundaries of a circuit's operating band, the impedance of the circuit increases, increasing the power dissipation and possibly overheating the electronics. At the same time, the gain decreases, causing the circuit to operate less efficiently.

ADEMCO's transceivers are also designed to take advantage of the 24 MHz channel separation between the transmit and receive frequencies in each channel pair. A single primary oscillator is used, and the transmit and receive frequencies are generated through an intermediate frequency amplification stage. This equipment could not be used in the 932/941 MHz bands because the transmit and receive channels in those bands are separated by only 9 MHz.

Redesigning ADEMCO's equipment to operate in different bands would be an enormous effort, impossible to complete in a reasonable time with current staffing levels. At least 10 major hardware components, including remote units, master station equipment, test tools, and repeaters, would have to be redesigned. With each of these components, ADEMCO already has some 4-5 man-years invested in pre-production design and testing. In addition, all automatic test equipment would have to be rebuilt to accommodate the new hardware designs.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on April 16, 1997

Gerald S. Harrison
Gerald S. Harrison

ENGINEERING STATEMENT OF SYDNEY T. BLACK

My name is Sydney T. Black. I am a Chartered Engineer in Great Britain with an MIEEE, and have been in the communications business for about 40 years. My consulting company, Black & Associates, has provided frequency coordination and FCC filing services in the United States since 1986. Our particular forte is in point-to-multipoint operations, for which we are well-known in the microwave industry.

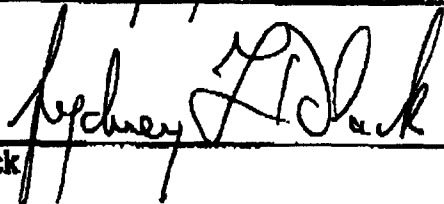
I have found the channels allocated for multiple address systems (MAS) in the 928-928.85 and 952-952.85 MHz bands to be very heavily used. Except for occasional license non-renewals, channel capacity in at least the top 50 metropolitan areas is completely exhausted, and in many cases has been for years. Only in rare cases could even a single station with one channel pair be coordinated in accordance with the FCC's spacing rules in these markets.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on

4/16/97

Sydney T. Black

A handwritten signature in dark ink, appearing to read "Sydney T. Black", is written over a horizontal line. The signature is stylized with a large, looped "S" and a distinct "B".